Vol. CVIII NOVEMBER, 1914 Number II

NASHVILLE JOURNAL
OF
MEDICINE AND SURGERY

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PUBLISHED MONTHLY - - $1.00 a Year in Advance

Entered at the Post-Office at Nashville, Tenn., as Second-Class Matter

Williams Ptg. Co,, Printers, 156 Fourth Avenue, North, Nashville, Tenn.

Contents for November, 1914

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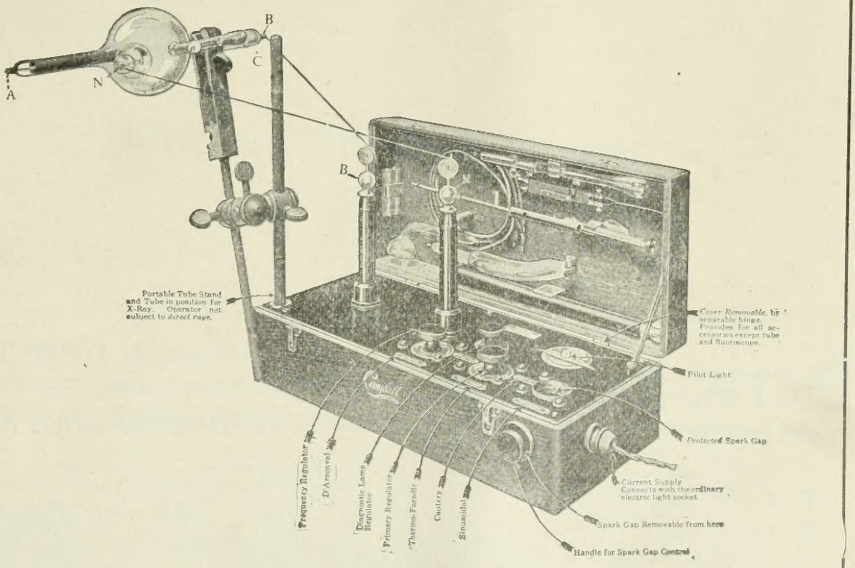

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—OF—
MEDICINE AND SURGERY

CHARLES S. BRIGGS, A. M., M. D., Editor

VOL. CVIII. NOVEMBER, 1914. No. 11

Original Communications

A. C. E. AS AN ANESTHETIC.*

BY W. T. BRIGGS, M.D., NASHVILLE, TENN.

I asked as a special favor to read a paper on A. C. E. anesthesia as a part of the symposium on anesthetics because I have had more experience with this anesthetic than any other and for that reason can give some reasons why, for many cases, this mixture is better than either ether or chloroform alone.

A. C. E. is a mixture of Alcohol 1, Chloroform 2, Ether 3, having a fruity, not disagreeable odor. Since it is a mixture and not a definite chemical compound the different ingredients volatalize with different degrees of rapidity. This and other mixtures are used a great deal in England and on the continent but very little in the United States. The different boiling points of the ingredients in these mixtures has lead to the following criticism by H. A. Hare in his textbook on Therapeutics. "The object of all these mixtures is evident—namely to get the anesthetic affect of the ether and chloroform without the cardiac and respiratory effects of ether, and the alcohol when added is to act as a stimulant. As the volatility of each ingredient varies, the mixture is

*Read before Nashville Symposium Society, November 5, 1914.

useless, for the ether evaporates first, and the chloroform next, and the alcohol last."

While I have the greatest respect for Prof. Hare, I certainly can not agree with him either in the statement that the mixture is useless, or the objection he raises to the different degrees of volatility. If the bottle containing the mixture is thoroughly shaken every few minutes during the operation, each drop is composed of the ingredients constituting the mixture in the proportion 1-2-3, and while any one drop may volatilize so that the patient inhales much more ether than chloroform and alcohol, it stands to reason that with the mask dampened with the mixture, the patient is constantly receiving the vapor of all the ingredients, and since ether constitutes half of the mixture and volatilizes more rapidly, the patient breathes more ether vapor than either of the other two, and that is exactly what is desired. If it had been the intention of those who first formulated this mixture for the patient to receive as much chloroform and alcohol as ether, then it would have been easy for them to have made the proportions different. While the patient receives more ether than either chloroform or alcohol, because the ether is not only in larger quantity but volatilizes more rapidly, it must not be forgotten that both chloroform and alcohol vapor are being inhaled and play a role in the anesthesia.

Note again, that Hare says: "The idea is to avoid the cardiac and respiratory effects of both ether and chloroform." It seems to me that the ether is used not only for its anesthetic effect but also because of its atom of oxygen which is a cardiac and respiratory stimulant. It is this pronounced stimulation produced by ether that contraindicates its use in certain cases. If this stimulation is neutralized by the depressing effects of chloroform it stands to reason that we can use A. C. E. in certain cases where straight ether is distinctly contraindicated. If A. C. E. is not used, then straight chloroform should be the anesthetic, for everyone who has studied anesthetics at all knows that there are certain cases in which straight ether is absolutely contraindicated.

Since Hare says the mixture is useless, I imagine he means the narcosis resembles either that of straight chloroform or ether

and not a narcosis different from both. As a matter of fact the narcosis is an individual narcosis in which some of the bad points are eliminated from both an ether and chloroform narcosis.

Because of the different degrees of volatility of the ingredients it has been said that A. C. E. carries with it all the dangers of straight chloroform and none of its advantages! In other words, the narcosis resembles an ether narcosis but the dangers of sudden death are just as great as if straight chloroform were being used; furthermore, the main post-anesthetic dangers of both drugs remain.

Since the amount of both ether and chloroform used in an ordinary A. C. E. narcosis is unusually small the dangers of post-anesthetic complications are minimized since these sequelae depend to a great extent on the fact that whether ether or chloroform is used, relatively large amounts are required. When A. C. E. is used neither ether nor chloroform is taken in amount large enough to ordinarily cause postanesthetic complications. The average amount of the mixture required for an hour's narcosis from the first drop administered until the mask is removed, is not over three ounces. Since this is given by the drop method on an open mask, which during most of the anesthesia, especially the first part is held away from the face, the actual amount is really less than three ounces. In other words, 1½ ounces of ether, when given in the A. C. E. mixture, means less ether than 1½ ounces of ether when given alone, since when ether is given alone, most anesthetists hold the mask close to the patient's face and often cover most of it with a towel in order to prevent the vapor from escaping. Of the three ounces of A. C. E. fully 1-3-½ of the whole amount is used to narcotize, the remaining part sufficing to hold the anesthesia. Of course anesthesia could be produced quicker and a smaller amount of the mixture used, but it is safer to hold the mask somewhat removed and allow 10-15 minutes before the surgical stage is reached, since the mixture contains chloroform, and I think statistics show that most chloroform deaths occur early in the anesthesia. A. C. E. can not be handled like ether, and it is the disregard of this fact that has lead many to give it up after giving it a short trial.

Of all kinds of anesthesia, that produced by chloroform is the most perfect, but it is also the most dangerous, except in certain cases where ether, nitrous oxide or nitrous oxide combined with oxygen are distinctly contraindicated.

In using A. C. E. the idea is to produce an anesthesia similar to chloroform but free from most of its dangers, and as contrasted with ether narcosis A. C. E. resembles that of chloroform in the following respects:

1. Complete anesthesia is produced more rapidly than with ether.

2. The stage of excitement is hardly noticeable.

3. Relaxation more complete than with ether.

4. Stertorous breathing not often present.

5. Small amount necessary to narcotize the patient and only a small amount necessary to keep patient in that condition.

6. There is less mucus and tongue swallowing. I never have to sponge out the throat nor use tongue forceps.

7. Postanesthetic nausea and vomiting less than with ether.

8. Lessened danger of the post-anesthetic complications of ether such as pneumonia, thrombophlebitis, anuria, insanity, apoplexy, etc.

A. C. E. is safer than straight chloroform, because:

1. Very little chloroform is used.

2. The oxygen atoms in the ether and alcohol are stimulating to both the circulation and respiration.

3. The post-anesthetic complications of chloroform, such as fatty degeneration of the liver, heart and kidney are not so likely to occur, since these pathological changes are toxæmic, the amount of the toxæmia being more or less proportional to the amount of chloroform used.

Others taking part in this symposium have impressed upon you the fact that all general anesthetics are dangerous and that there is not one amongst the long list but what has its drawbacks. The main drawback to the use of A. C. E. is the fact that it contains

chloroform and because of that ingredient is somewhat more dangerous than ether. In our work at the infirmary, A. C. E. has been the anesthetic of choice for twenty-two years and so far we have had no occasion to give it up. However, during that time nitrous oxide, ethyl chloride, ether and chloroform have been used and will be used in certain cases. No one anesthetic is suitable for all cases. We have used A. C. E. more than any of the others, simply because it seemed to be the best anesthetic in the greatest number of cases and not because there has been any prejudice against the other drugs.

Selected Articles

AMPUTATION OF CERVIX FOR BILATERAL LACERATION AND CYSTIC DEGENERATION — STERILITY DUE TO ANTEFLEXION OF THE UTERUS, DUDLEY OPERATION.

BY RALPH WALDO, M.D., F. A. C. S., NEW YORK.

Case 1. This patient is twenty-seven years of age. Two years ago she gave birth to a child after a severe instrumental delivery. There was a bad laceration of the perineum at the time, which was repaired with good results. The cervix was also lacerated, but was not repaired. It is good surgery to repair the perineum immediately following delivery, and not to wait for the expulsion of the placenta if it has not come away spontaneously just after the birth of the child, for after the delivery of the placenta there is a good deal of blood which is often quite annoying. The delivery of the placenta over the repaired perineum does not injure it. A great many suture materials are used for perineorrhaphy, but my experience leads me to prefer chromic catgut No. 2. This stays in the perineum as long as a suture should be left there; it is soft, does not scratch or irritate the patient, nor cut the tissue. In a general way, the deep stitches, passed from the integument on one side all the way around the rent and out at the opposite side, are sufficient to hold the parts in apposition. A three-inch full curved Hagedorn needle is generally used. Sometimes the rent extends so far up the vaginal wall that it is necessary to place a number of stitches well up in the vagina, and these should be so inserted as to secure a good approximation. Great care should be taken not to draw these sutures too tight or they will cut. It must also be borne in mind that in closing the perineum immediately following a laceration, there is always considerable

edema for the first week after delivery, and if the stitches are drawn too tight they are bound to cut and in some instances to cause sloughing.

Formerly, there were differences of opinion as to whether or not the lacerated cervix should be repaired at once, but it was found that if it was large it was very apt to retract away from the stitches and to give a bad result. It was also found that the percentage of cases of sepsis was very much increased by the immediate operation, so that at the present time the only cases in which it is done are those attended with severe hemorrhage. This can best be arrested by passing chromic catgut so as to control the bleeding vessel.

This patient made an apparently good recovery from her delivery and the perineum united well; but she has not been in quite as good condition as she was before. She has complained of a bearing down pain in the lower portion of the abdomen, has had pain in her back, has been nervous, has had a decided increase in her menstrual flow, and on several occasions has menstruated once in two weeks rather than once in four weeks, which was her former habit.

On examination I find a bilateral laceration of the cervix, with marked eversion. I also find a large uterus with more or less discharge from the canal, showing that there is a chronic metritis, and evidence of hypertrophic endometritis. I am led to this diagnosis by the increase in the menstrual flow.

We will place this patient under ether narcosis, and as the apparatus usually employed for this purpose is out of order, she is instructed to keep her mouth closed during the administration and also to clasp her hands together. You will notice that she goes under the anesthetic without any appearance of discomfort. The hands are clasped so that in attempting to grasp things with either hand, it simply has hold of its fellow. A very important point is to insist upon the patient keeping her mouth closed, for if it is open any sudden inhalation will carry the ether directly into the pharynx, with resulting spasm of the glottis, which produces the disagreeable symptoms which so many patients complain of in taking this anesthetic. This will not take place if the

mouth is kept closed and the ether is allowed to pass in through the nose. It makes no difference what kind of inhalation apparatus is used provided you give the patient the pure vapor of ether instead of the ether only partially vaporized.

This patient is placed on her back and the external parts and the vagina thoroughly washed with green soap and sterile water. Gauze is used for this purpose and not a brush, which is apt not to be sterile and in many instances irritates the patient, and in other instances is too soft to be of any use. The parts are thoroughly washed with sterile water and soap. We are very careful to protect the meatus urinarius from direct contact with any soap. If that is not done, there is apt to be a urethritis, and the catheter will be more often required after the operation. After the parts have been thoroughly cleansed and all the soap has been thoroughly removed with sterile water, the urine is drawn and the parts again washed with sterile water.

Now, with the patient on her back and the legs drawn up, we introduce a speculum and find a very characteristic picture. There is a bilateral laceration of the cervix, more marked at the left, with a number of cysts showing just within the cervical canal and also on the lips of the cervix. The cervix is patulous, and a number of granulations are present. On careful examination it is found that the laceration is very extensive. I introduce a dilator and stretch the internal os, and find that there is a cyst that can just be seen in the upper portion of the cervical canal. I explore the interior of this uterus with a dull Thomas curette, and find it four inches deep. After a thorough exploration with the dull instruments, I use a Sims' sharp curette. This is not, strictly speaking, a curetting instrument, but it is sufficiently sharp to effectually scrape the interior of the uterus. A number of granulations are thus removed, but not so many as we have in many cases. I perform the amputation of the cervix that was devised by Marion Sims. This operation is indicated in a woman over forty years of age. Trachelorrhaphy at this time of life is seldom very satisfactory. There is free hemorrhage, and once in a while I cut into a cyst. The cysts are well up in the cervical canal.

This is one of the most marked cases of cystic degeneration of the cervix that I have seen. Now, I have performed a circular amputation. In this case, owing to the cystic degeneration, it is necessary to sacrifice much more than is usually required. The first suture is passed on the left side, close to the uterus, and by tying this you notice we stop the profuse hemorrhage. Formerly, many methods were devised for arresting it. One of these is an elaborate tourniquet for the cervix itself, but it has been found that the proper application of the suture is all that is required. It is very necessary in these cases to stitch the cervical mucosa to the vaginal mucosa. The needles are the full curved cervical needles devised by Emmett, the best that have ever been used for this purpose. I have introduced two chromic catgut sutures posteriorly, stitching the cervical mucosa to the vaginal mucosa, and now I am introducing two more. There are two anterior, two posterior, and two at each side, making eight in all; more than these are rarely required. In operating on the cervix, the stitches should be drawn tight. This is not the case with the perineum. You will notice now that the sutures are all placed anteriorly, posteriorly, and on the left side of the cervix. It is not necessary to bring the cervix down. I now introduce the chromic gut on the right side. Again, this takes three stitches to close the wound. Before cutting off the sutures, I will pass the sound into the cervical canal. The external os is larger than in a normal uterus, and you should always leave it larger, because as involution takes place the cervix contracts with the rest of the uterus, and the os finally is of the size that it should normally be; otherwise it will be found too small five or six months after the operation. One year I operated on an average of once a month for stenosis of the cervical canal following operation on the cervix. This is apt to take place where great care is not taken to unite the cervical and the vaginal mucosæ together. During the last two or three years, I have not seen so many cases as formerly. I think this is due to the fact that surgeons now generally recognize the importance of this procedure.

Following this operation it is very necessary to tell the patient that she will derive very little, if any, benefit until the expiration

of three or four months after its performance. Within a few days they may experience a good deal of relief, due to the local blood-letting at the time of the operation, but all the disagreeable symptoms—pain in the back, dragging down, etc.—return; and unless these patients are warned of this fact they may be very much discouraged. I have known of instances where they have gone to some quack and taken a patent medicine, and have attributed their eventual recovery to this and not to the well-performed operation on the cervix. At the expiration of six months they will be much benefited, and will continue to improve for a year following the operation. This is due to the fact that it is performed for the cure of the subinvolution of the uterus, not for esthetic reasons, and the symptoms will not disappear until the uterus has returned to its normal size.

The question frequently arises whether in subsequent pregnancies these lacerations will recur. If you perform this kind of operation on the cervix and are careful not to constrict the canal too much, the patient is no more liable to a cervical laceration than if it had never been done. I have seen a very large number of these women who give birth to children without any damage to the cervix, although there had been an extensive laceration which had been repaired. This is also true of many lacerations of the perineum. The fact is that where the cervix or perineum is properly repaired, the liability to laceration is not as great as in the ordinary primipara.

The after-treatment of these cases is very simple. If the patient suffers a good deal of pain, she is given small quantities of morphin, hypodermically, usually 1-6 grain, and it is seldom that she receives more than one or two doses; frequently not that. If the patient wishes to pass urine, she is allowed to do so; if necessary, a catheter is used as soon as she complains of discomfort from retention. Many times, immediately following the operation, patients will go ten or twelve hours before the catheter is used. After that time, it usually has to be employed once in six or eight hours, but it is resorted to oftener if there is discomfort. The strictest antiseptic precautions are taken in drawing the urine, and cases of infection of the bladder and cystitis have been mark-

edly diminished since we have adopted as a lubricant for the catheter a 20 per cent solution of argyrol. The cystitis formerly produced by the catheter was not always due to its improper sterilization or to improper washing of the patient, but frequently to germs left in the lower portiton of the urethra and carried from thence to the bladder by the catheter.

If the patient's bowels do not move by the second day, a laxative is given. This is especially true where the perineum has been operated upon; and where there has been a complete perineal laceration into the rectum the greatest care must be exercised to see that the woman has at least three or four evacuations from the bowel every day.

After passing urine or after a movement of the bowels, the external genitals are douched with a mild antiseptic, usually 1-5,000 sublimate solution. No vaginal douche is given until the expiration of about a week; then a daily vaginal douche of the 1-5,000 bichloride solution—not hot but merely warm—will afford comfort. It is not necessary to use an antiseptic douche; sterile water is all that is necessary; but when a mild antiseptic douche is employed you feel sure that it is sterile.

Case II. This patient is twenty-three years of age; born in Russia; marired for two years. She presents herself because she does not become pregnant and wants children. Microscopical examination of the semen from her husband shows numerous spermatozoa, apparently healthy.

She also complains of pain during the first two days of each menstrual period, which is of the ordinary monthly type, the flow lasting six or seven days.

On vaginal examination, marked anteflexion is found to exist. In the strictly technical sense this patient can not be said to be sterile. Theoretically, a woman who has been married for three years and has used no preventives against impregnation, and has never been pregnant, is said to be sterile.

I have seen patients go a much longer time and become pregnant. I remember one in particular, who had been married for fourteen years and had undergone much treatment for sterility. Years after giving up all hope she came to me for what she sup-

posed to be an abdominal tumor—in fact, it was an abdominal tumor, but a physiological and not a pathological one, and she expected me to advise her to have a laparotomy. I told her to wait two months and she would be delivered of a child. She was immensely surprised, but returned to the clinic about three months later with a child in her arms.

There is uncertainty as to the percentage of sterility due to the female and that due to the male. The largest estimate that I have been able to obtain from innumerable statistics is ten per cent attributable to the male. I believe that this is at least twice as large as actually exists. The most frequent cause of sterility is anteflexion. In what proportion of these cases the anteflexion causes the sterility by obstructing the entrance of the spermatozoa is very uncertain. I believe that in a large percentage the sterility is the result of the endometritis caused by the anteflexion rather than of the obstruction caused by it to the fecundating elements. At any rate, the procedure that drains the uterus the best and leaves the most direct cervical canal has, in my experience, resulted in the largest number of cures. I have dilated these case and amputated the cervix, but the largest number of cures have been obtained by me from the Dudley operation on the cervix. This consists in making an incision in the posterior lip of the cervix, extending well up so as to reach the angle of flexion, of course being careful not to open the cul-de-sac and to keep the incision in the uterine substance. The corners of this wound are turned down and stitched, so as to leave a direct cervical canal at the upper angle of this incision, and the turned down lips of the cervix at each side surround this new canal with mucosa, so that it will not again unite.

An old operation, the posterior discision of the cervix, resulted in a certain number of cures, but as the surfaces were not covered with mucosa the wound was found to close in a very short time.

To make the entrance doubly sure, these cervical canals are also thoroughly dilated with a steel branch dilator before this operation is performed. This dilatation is as extensive as the tissues will stand without laceration. The flaps are turned back and stitched with chromic catgut No. 2.

These patients are seldom required to remain in bed over a week, and many of them leave earlier.—*International Journal of Surgery.*

A STUDY OF 150 CASES OF TWILIGHT SLEEP.

BY JACOB HELLER, M.D., BROOKLYN, N. Y.

In considering any measure for the relief of pain incident to childborth, two things have to be proven: (1) That the measure actually does relieve the pain, and (2) that it is free from danger to life and health of mother or child.

That opium and its derivatives, and scopolamine and the whole group to which it belongs, possess in vary degrees, the power so to lower the sensitiveness of the nervous system as to diminish pain or abolish it, has long been an established fact, but that they can be used in combination in such manner as to rob childbirth of its terrors and render it painless or almost so, without interfering with its normal termination was first described by Steinbuchel in 1902.

It was, however, Gauss of Kronig's Klinic in Freiburg, who brought the use of scopolamine-morphine anesthesia in labor prominently before the world. It was also Gauss who gave it the convenient and descriptive name of "Dammerschlaf," or as we call it, "twilight sleep." His first article on the subject, which appeared in 1906 and contained a report of five hundred (500) labors in which twilight sleep was used with relief of pain and perfect safety to mother and child, created intense interest in the subject among medical men, and for a considerable time after numerous reports on the subject appeared in medical literature. Some of the writers, chief among whom were Kronig, Zweifel, Beiruti and Newell, confirmed the observations of Gauss as to its efficacy and safety. Others, particularly Hocheisen, not only denied any great benefit to it, but condemned it as unsafe and dangerous to mother and child.

As has so often been the case, however, in medical research and investigation, the adverse reports were readily accepted as final, with the result that interest in the subject subsided, and, with the exception of Freiburg, where it was adopted as a routine measure, the method was not tried anywhere to any great extent and with any degree of thoroughness.

In May of this year there appeared in a New York lay magazine a sensational article on twilight sleep which brought down upon itself the just criticism of the medical press, but which, however, served the good purpose of reawakening a general interest in the question. It was then that the medical staff of the Jewish Maternity Hospital decided to give the method another and thorough trial if possible. We say another and thorough advisedly, for only an indifferent attempt had been previously made and abandoned for no apparent reason. We were fortunate in having been able to obtain the coöperation of Dr. Kurt E. Schlössingk, a coworker of Krönig and Gauss, who was thoroughly familiar with the Freiburg technique, mode of administration, indications, and contraindications, points so much emphasized by Gauss as essential to the successful application of this method.

Our report is based on the experience obtained in 150 cases drawn from the charity and private service of the Jewish Maternity hospital.

No case was excluded except for one of the following reasons: (1) A marked disproportion between the fetal head and pelvis, requiring in the opinion of the attending, a major obstetric operation. (2) Placenta previa. (3) Absent or doubtful fetal heart sounds. (4) The woman being too far in labor. The last class was excluded for obvious reasons; the first three, because we did not want any accident to mother or child, under such circumstances, to be attributed to the twilight sleep. All minor degrees of pelvic contractions were included, where it was thought labor could be terminated by forceps. So also were included in this series two cases of nephritis with threatened eclampsia, one of which culminated in convulsions six hours after delivery and made a rapid and uneventful recovery, as well as two cases of chronic endocarditis. These two latter were particularly gratifying, go-

ing through their labor without any shock or strain on their hearts. It seems to us that twilight sleep is exceptionally useful in this complication.

Of the series one hundred and thirteen (113) were primiparæ and thirty-seven (37) multiparæ; one hundred and forty-eight (148) presented the vertex and two the breach. Of the vertex presentations there were the usual number of position, thus: 103 were L. O. A., 27 R. O. P., 16 R. O. A. and 2 L. O. P.

Mode of Delivery—Of the total of 150, 131 delivered themselves spontaneously with the ordinary support of the perineum, and 19 were artificially terminated. One by breach extraction and 18 by forceps, 3 of which were medium and 15 low. With a little more patience on the part of the attending physician the number of forceps deliveries could have been reduced to six, for in only six of the cases was there any indication for immediate delivery. The others were done for the convenience of the attending. Kronig lays great stress on the fact that twilight sleep reduces the percentage of forceps deliveries, for the reason that with the pain and the consequent exhaustion removed, there is no risk to let the patient take a longer time to deliver herself.

Separation of Placenta and Bleeding—"What effect has the method on the separation of the placenta and bleeding?" is one of the questions most frequently asked. For, with absence or diminution of subjective pain, it is difficult, for one who has not watched these cases, to conceive of a well contracted uterus. In our whole series we did not meet a single instance where the placenta was retained for longer than thirty minutes, and the average time for its expulsion was about twenty minutes. Nor did we meet a single case in which bleeding was abnormally profuse. In fact, a hemorrhage which might have been expected in 150 labors was here conspicuous by its absence.

Duration of Labors—With very few exceptions, all writers on the subject agree that labor is moderately prolonged by twilight sleep. Siegel, of Freiburg, states that in their experience there is a delay of about one hour for the first stage and thirty-three minutes for the second. Our figures on this phase are rather inconclusive and, if anything, would show a shortening of labor,

for the average duration of labor in the primiparæ of the series was only 8½ hours, obviously too short. The reason for this apparent shortening is the fact that the great majority of our patients are admitted in a fairly advanced state of cervical dilatation, and our records take the time of their admission to the hospital as the time of the onset of labor. Personally, from observations made on a small number of cases that were admitted, that were not in labor, I believe the first stage is actually somewhat shortened, and I attribute that to the softening effect, morphine-narcotine meconate and scopolamine have on the cervix and lower uterine segment. The second stage, however, is positively delayed. The patient being in a semi-conscious state can not be taught to utilize her abdominal muscles to advantage, since the contractions of the abdominal muscles are entirely of voluntary origin.

Conditions of the Mother During Labor and the Puerperium—Half an hour after the first injection the patient usually becomes flushed. The pupils are dilated and the lips parched. She is somewhat drowsy and her pains are markedly diminished. With the second dose her sleep deepens and the uterine contractions are evidenced by a slightly painful expression on her face or by very weak attempt at crying. Her memory, however, is still not much impaired. It is not until after the third injection that her memory is entirely lost. She then fails to remember any object previously shown her or the number of injections given, although she will answer questions quite readily on anything that does not tax her memory. This state continues until the birth of the child, when she falls in a quiet and natural sleep lasting in our patients about three hours. She awakens rested and cheerful, free from any shock or sign of exhaustion, no matter how long the labor lasted. Often the patients asks of the nurse when she will be through with her confinement, and it has been hard to convince her that she is already through without showing her child to her and inviting her to feel her reduced abdomen. The rest of the puerperium was perfectly smooth and normal, so much so that patients were with difficulty kept in bed and many were permitted to get out on the second or third day.

The most troublesome thing encountered by us was occasional restlessness. Particularly was such the case at the beginning of our work when we were rather timid and felt our way slowly, being uncertain of the dosage and the intervals. With gained experience and confidence in the method we were able to eliminate much of the restlessness, and the latter was only rarely evidenced by the patient's moving about in bed and upsetting her aseptic surroundings.

Effect on the Child—The harmful effects of opium and the belladonna group on infants and children being known, apprehension for the twilight child is justified. Many prospective mothers, as well as many physicians, ask the question: "Does twilight sleep have any ill effect on the child?" Of the 152 children (two of the births being twins) not one was born still, that is, failed of resuscitation. Three of the children died within a short time after birth. One, in the eighth month of gestation, with a spina bifida, died three hours after birth; a second died three days later from melena neonatorum with a family history of bleeders, and the third one apparently from subdural hemorrhage. We could obtain no postmortem to verify our assumption and so this death remains doubtful. But even if we should credit it to twilight sleep, the child mortality would be 0.6 of one per cent, comparing more than favorably with the ordinary fetal mortality of 1.5 per cent. The fetal heart *in utero,* which was always watched with the greatest care, never went up above 160 or fell below 120 per minute. One hundred and twenty of the children cried out immediately and spontaneously. In 29 there was an average delay of five minutes, and in only one case, where, owing to great restlessness of the mother, we were compelled to repeat the morphine-narcotine meconate three times, was there a delay of 20 minutes, requiring artificial respiration. This child did not do well for a week; was rather drowsy, did not take the breast, and cried but weakly. It finally, however, made a good recovery. The comparative freedom of the child from the effects of drugs, which so overwhelm the mother, can be explained only by the selective powers of the placenta preventing the greatest part of the drug from reaching the fetal circulation.

Technique—We followed the technique practised at Freiburg without deviation. When it was determined by the effect of the uterine contractions on the cervix and membranes, that the patient was in active labor, she was removed to a dimly lighted room away from the general noise of the hospital. She was placed in a bed prepared for delivery. After her pulse and respiration, the fetal heart, as well as the frequency and duration of the uterine contractions, were observed and noted down on record, she was given an initial injection of 1 c.c. of a 3 per cent solution of morphine-narcotine meconate, which is equal to half a grain of the powdered drug. Through the same needle and without removing it, she was injected with 1.5 c.c. of a 3-1000 of 1 per cent solution of scopolamine hydrobromide, equivalent to 1-1333 of a grain. One hour later a second injection of scopolamine alone, one third-of the original dose, that is, one-half c.c. of the same solution, was given. Half an hour after the second injection the memory test was applied; the patient was asked whether she remembered having seen a certain object previously shown her or the number of injections given her. If her answer was ready and clear she was given another half c.c. of scopolamine at once, if not, we waited with the third injection for the hour. She was then constantly watched, and the injection of 0.5 c.c. of scopolamine repeated on the slightest sign of reappearance of memory until she was delivered. On an average the injection had to be repeated every one and one-half hours. The greatest number of injections given to any one patient was 19, the smallest, one; the average, five. The longest time a patient was in twilight sleep was 25½ hours; the shortest, 45 minutes; the average, 6½ hours. In only a few instances, owing to restlessness of the mother, did we repeat the morphine-narcotine meconate also. Pituitrin we used rather frequently, a little more often than ordinarily. With the birth of the child the cord was rapidly clamped and the child removed whenever that could be accomplished before it cried, so as not to awaken the mother.

Results.—In 122 cases, or 81.3 per cent, we succeeded in obtaining a complete amnesia and an almost equal degree of analgesia. All that occured during the time the patient was under

the influence of the drugs, was wiped out of her memory. In 13, or 8.7 per cent, we got analgesia without amnesia. These were started somewhat too late. Gauss thinks that the ideal case is one in which amnesia is complete. In our opinion, amnesia, while present in the great majority of cases, is not essential. The analgesia case without amnesia seems to us the more ideal, for not only does that labor appear more natural, but the patient can make good use of her abdominal muscles to shorten the duration of her labor.

If fifteen cases, or in 10 per cent, we failed to obtain any marked results. With our present experience it is quite possible to reduce the number of failures to a smaller figure, but since the sensitiveness of the nervous system varies in different individauls, as does the susceptibility to drugs, there will always be some cases that will not be influenced by the drugs unless carried beyoynd the point of safety.

Our small series, then, proves that judiciously used, and with proper precaution, the method is capable of relieving pain in 90 per cent of cases and that it is free from any danger to life or health of mother or child.

Let me say a word about the objection raised against any attempt to relieve childbirth of pain and suffering. It is argued that since nature that encourges propagation in every possible way and manner, could not have been so cruel and inconsistent as to inflict untold suffering on half of the human race, or perhaps on half of living creation, and thus handicap her own work, if she had no distinct purpose in that pain and suffering; and that any interference with that purpose will be resented by her in some manner. Kronig tries to meet that argument by stating that a very great number of our present-day women to whom twilight sleep is particularly beneficial, are so far removed from nature as to make their labor border on the pathological, and therefore, he says, interference is not only justified but clearly indicated.

In our opinion, subjective pain incident to childbirth serves no purpose in nature but is rather an unnecessary result of an unchangeable natural law, that all severe muscular effort is accompanied by pain. The metabolic end-products of muscular activ-

ity are irritating to the nerve ends, causing pain. Thus, we see fatigue following an immoderate bodily exertion, severe pain accompanying the hurried muscular peristalsis of the bowel in ridding the system of injurious material; excruciating colic caused by the expulsion of a biliary or renal calculus, and finally agonizing pain incident to the expulsion of the fetus from the uterus, and in trying to relieve this pain we are not in conflict with a natural purpose, but with an unnecessary and undesirable result of a natural law.—*Medical Record.*

Extracts from Home and Foreign Journals.

SURGICAL

A Method of Opening the Abdomen for Appendicectomy.

Dr. G. H. Edington (*Brit. Med. Jour.*, Sept. 12, 1914) describes a method the underlying principles of which are: (1) Division of the posterior sheath of the rectus transversely, in the direction of the aponeurotic fibers, and (2) preservation of the muscle itself to form a support to the scar. This method consists in exposing the rectus muscle, looseing it in its sheath, retracting towards the middle line, and transverse division of the posterior sheath and peritoneum. After the appendix has been removed and the posterior sheath and peritoneum sutured, the rectus is allowed to fall back into its normal position, and the anterior sheath and superficial wound closed. Edington has performed this operation in close to 100 cases, and where there has been primary closure of the incision the results, as regards absence of hernial protrusion, have been absolutely satisfactory.—*International Journal of Surgery.*

Operative Treatment of Traumatic Stricture.

The literature of the European continent during the last few years has contained many references to the operative treatment of stricture which seeks to replace diseased by healthy tissue either by grafts (Saphenous Vein of Tanton), or by resection of the strictured portion of the canal. The latter method has been applied especially to traumatic strictures. The healthy portions of the urethra adjacent to the stricture at either end are fully mobilized to permit of their easy approximation without undue tension. The scar tissue is then excised and the free margins accurately sutured with fine catgut. As much as 5 cms. of the

urethra have been thus resected (Cochez, *Journal d' Urologie,* IV, 1). Some of the operators guard the healing of the urethral wound by diverting the stream of urine either through a suprapubic cystostomy or through a perineal. Others are content to merely tie in a catheter. The results as a whole are generally reported as quite satisfactory.

My own opinion is that a permanent catheter tied in may do more harm than good, since it is essential that the urethral wound heal by first intention. There is always without fail inflammation about a catheter left in the urethra and the presence of a foreign body only serves to aggravate it. While this is a matter of minor consequence when the catheter is left in order to keep a diseased bladder drained as in prostatic enlargement, yet it is all-important, when the primary healing of an urethral wound is sought. Such a wound breaking down not only defeats the aim of the operation, but may even serve to make the condition worse than it was before.—*Pacific Medical Journal.*

Harness Rivets Removed from Nasal Cavity.

While we frequently remove from the nasal cavity foreign bodies which have been retained a short time, yet it is rare to find them retained so long without the patient knowing it. A boy, aged 7, had always been healthy until two years ago, when he had an attack of 'influenza" lasting several days, at which time there was quite a profuse nasal secretion of a thin, watery nature; the general disorder which had been diagnosed influenza subsided, but the nasal discharge gradually got worse until it became purulent and very foul; nasal douching had little effect; "even the skill of the magnetic healer failed to effect a cure." I first saw the child September 20. He was moderately well nourished, was somewhat anemic and presented the appearance of a child with adenoids. A purulent discharge from the nose was very foul. Careful examination revealed a metallic body in each nasal cavity. These were removed with some difficultyy and proved to be quarter-inch harness rivets. They were considerably corroded, show-

ing that they had been in place a long time. A few subsequent treatments cleared up the trouble nicely and the boy is now able to breath through the natural route. This simply emphasizes the necessity of a careful examination of the nasal cavity and all accessory sinuses in every case presenting with a foul nasal discharge.—*The Journal of the Am. Med. Asso.*

Scopolamin in Anesthesia.

Fonyo thinks that he is justified in drawing the conclusion from his experience with scopolamin in 154 cases that the scopolamin-morphin technic is not dangerous for vigorous and well-nourished patients. But when a not very strong patient has been purged for an operation and is not allowed or does not wish to eat and is not allowed to drink for fear of bringing on vomiting, the organism feels the effect of the drugs much more intensely. Disturbances are peculiarly liable if there is already some derangement in the respiratory apparatus, as morphin seems to act particularly on the respiration center. One of his patients with cancer of the rectum has been given regularly three times a day for weeks a subcutaneous injection of 0.006 gm. scopolamin and 0.02 gm. morphin without any disturbance; she is able to eat and is well nourished. An older, demented woman suffering from hunger and thirst, was given a single dose like the above, fractioned, and fell into a deep sleep, and died with signs of paralysis of the respiration in forty-eight hours.

He relates the details further of two fatalities following operative delivery. Cesarean section was done in one case and pubiotomy in the other. Both succumbed to paralysis of the respiration one hour after the operation which had been done under chloroform preceded by 0.0012 gm. scopolamin and 0.03 morphin. He thinks that the loss of blood and the lack of food as the patients were being prepared for the serious operations were responsible for the unusual toxic virulence of the drugs. He remarks that the mishaps from scopolamin are more numerous since pantopon has been substituted by some for the adjuvant morphin.

Voit and others have calculated that during inanition the skin loses up to 97 per cent of its fat, the liver 70 per cent and the muscles 64 per cent, but the lipoid content of the brain increases. Consequently the brain is larger in proportion than when the organism is well nourished, and this gives greater play to the toxic action of the drugs.—*The Journal of the Am. Med. Asso.*

Gonorrheal Epididymitis.

In treating gonorrheal epididymitis by Bier's method, Wilson (*Brit. Med. Journ.,* Nov. 15, 1913) makes use of a strip of lint 1½ inches wide, a piece of rubber tubing, and a pair of artery forceps. "The cord on the affected side is encircled just above the testicle by the strip of lint, which is continued round between the two testicles along the median raphe of the scrotum. Over the lint is applied the rubber tubing which is tightened to the required extent and secured by the forceps." When properly applied the apparatus should cause an immediately relief of pain with an agreeable sense of warmth. Soon after the application the tissues should assume a purplish color. The treatment should be applied an hour the first day, increasing daily up to eight hours if possible.—*Medical Review of Reviews.*

The X-Ray Treatment of Ringworm.

Oram in the *Liverpool Medico-Chirurgical Journal* for July, 1914, tells us that a year ago an X-ray clinic was instituted by the Education Committee of the Liverpool Corporation, and during the past year 150 children have received treatment. Taking the period from August to December last year, during which period forty-two children came for treatment, 35 of these were cured at the first exposure—i. e., 85 per cent; and the average time which elapsed between the time of their first attendance and their being certified as free from ringworm and able to attend school, was just under four weeks. The other 15 per cent had

to receive a second treatment, and the average time for these between their first attendance and their cure was twelve weeks.

One child developed an eczema of the scalp outside the area treated, and the writer thought it well to discontinue the treatment lest it should be held responsible. Otherwise all cases were cured within the three months' period. The writer knows that no other form of treatment can hold out promise of such speedy or certain results, and when in addition it is considered that the manipulation is carried out entirely by the medical man, and that in a period of about half an hour, and that the coöperation of the parents, which is frequently difficult to obtain amongst the very poor, is not an essential detail, one can not fail to be impressed with the value of this method.—*The Therapeutic Gazette.*

Tarsalgia.

Merrill (*Surgery, Gynecology and Obstetrics,* July, 1914, concludes a well-illustrated article on this topic as follows:

This condition is of static origin, generally combined with a systemic disturbance. The condition of static subluxation of the mediostarsal joint has for its principal factor a contraction and shortening of the posterior tibial muscle, and generally is associated with a depression of tone and power of the anterior tibial.

A fairly constant type of symptoms can be found. The condition usually exists without a frank inflammatory process present, and will yield to prolonged rest or palliative measures, or both.

A certain derangement of relationship of structures in the foot and leg, and perversions of function, will produce a definite type of pain in the tarsus, or tarsalgia.—*The Therapeutic Gazette.*

Cutting Both Phrenic Nerves in Tetanus.

Jehn reports from Sauerbruch's clinic at Zurich a case of extremely severe tetanus in a boy of eight who was suffocating from recurring spasms of the respiratory apparatus, each lasting three of four minutes with cyanosis and unconsciousness. The rigid

thorax and spasm of the diaphragm rendered artificial respiration impossible. After the third spasm of the kind Sauerbruch severed the phrenic nerve on each side through an incision along the posterior margin of the sternocleidomastoid, under ether. The type of breathing altered at once and artificial respiration became possible. The boy had thirty-five severe convulsions afterward, but with oxygen, artificial respiration and a temporary gastrostomy he was tided along to final recovery. The boy shows no ill effects now, four months later; the diaphragm rises and falls mechanically with the breathing. Expectoration proceeds even better than under normal conditions.—*The Journal of the American Medical Association.*

Treatment of Fractures About Elbow Joint.

After reducing the fracture and placing the forearm in the acutely flexed position Hartshorn applies the dressing as follows: 1. The placing of a gauze bandage extending from the wrist to the elbow permitting free movement at the elbow. 2. An adhesive strip is applied as suggested by Scudder, extending from wrist to arm. 3. Starting at the elbow the center of a strip of adhesive plaster 1½ wide and of sufficient length to encircle the forearm and arm is placed posterior to the elbow and its ends brought forward to the anterior surface in the same manner as that employed in strapping the knee joint. A second strip if applied overlapping this one-half. This is followed by more strips of a similar nature, gradually ascending until the forearm and arm have been completely covered both anteriorly and posteriorly. Protected as they are by the gauze bandage previously applied, the adhesive does not at any point come in contact with the skin except at the hand and shoulder. 4. The application of a strip of adhesive plaster 5 cm. wide along the dorsum of the forearm and over the uninjured shoulder. This holds the hand firmly in position. 5. A similar strip of adhesive is then applied around the arm and chest just above the elbow.

The subsequent treatment of the fracture requires: Daily inspection for the first week. At the end of this time the adhesive plaster is removed and passive motion leading toward extension is applied. If acute flexion can be easily regained the dressing is reapplied, reducing the angle of flexion by substituting a muslin or gauze swathe for the plaster, allowing only the adhesive band to remain. This is permitted to stay in place for one week longer, when some form of an external angular splint is applied, which allows adjustment of the angle. After the second week massage and passive motion are employed each second day until both flexion and extension are approximately normal. Daily use of the extremity after the fourth week.—*Medical Record.*

Prognosis in Cancer of the Tongue.

W. Trotter states that operations undertaken for epithelioma in which the diffuse stage has bgun are particularly apt to be followed by early, rapidly growing, and diffuse recurrence even when the type of disease has been recognized, the growth is quite small, and the excision has been very extensive. It can not be doubted, therefore, that in these cases there is a diffusion of cancer cells throughout the tissues around the growth to a distance far beyond the palpable induration and extending into regions which do not display the least abnormality to the naked eye. When, therefore, operations are undertaken for this type of the disease there is no chance of cure unless an extremely drastic procedure is adopted. A radical extirpation of the tongue muscles down to and perhaps including the great cornu and body of the hyoid bone at the least on the affected side is essential, and there is a good deal to be said for total extirpation of the tongue and hyoid bone. The only serious dangers of even the most extensive operations are those due to sepsis, which takes two forms —infection of the lungs and infections of the wound. The former if at all severe leads to abscess formation and gangrene with an almost necessarily fatal result; the latter may lead to acute septicemia or to a cellulitis extending diffusely in the neck, with the

risk of mediastinitis and of secondary hemorrhage. The best precaution, therefore, against lung infection is the abolition of the possibility of aspiration. Local infection can usually be prevented by adequate suture of the wound. Patients with clean mouths and who are habitually careful with them are little if at all less liable to serious complications than those who are careless and whose mouths are obviously septic. Edentulous patients give rise to no serious anxiety on the score of sepsis.—*Medical Record.*

MEDICAL

Erysipelas.

Arneth reviews his experience with several hundred cases of erysipelas. He has encountered a few rapidly fatal cases, among them that of a healthy man between 30 and 40 who died eight days after the onset of severe erysipelas; staphylococci were found in pure cultures in the tissues. In another case a healthy woman of 46 developed erysipelas after removal of a small dermoid cyst on the arm. The erysipelas spread over the whole body and fatal paralysis of the heart developed. In such severe cases all treatment is futile, and in the mild cases spontaneous recovery is the rule whatever treatment is applied. It is important, however, to restrict the spread of the erysipelas and he has never found anything so effectual for this as painting the region and vicinity with a 5 per cent oil solution of phenol. This is applied three or four times a day, leaving the area uncovered all the time. There is no caustic action from the phenol and the tissues are not irritated as by application of salves or dressings. The thin coating of oil softens the skin and works its way in; it relieves the pain and tension and by its anesthetic action tends to subdue the inflammation. In his years of experience with this carbolized-oil treatment he has never witnessed any signs of intoxication from it, and it does not stain the linen. This principle of refraining from irri-

tating procedures and anything that might force the germs into the depths of the tissues, he thinks, should be followed in treatment of all suppurative processes. He refrains from touching even a blister, and never tries to cleanse the erysipelas region until several days after all signs of inflammation have subsided. Then he clears off with olive oil any loose skin, not permitting water for some time yet. Otherwise there is danger of the process flaring up again; still virulent germs might easily be mobilized by any manipulations of the kind. He reviews numerous other methods of treating erysipelas as practiced by about fifty other clinicians, but thinks the phenolized oil surpasses them all in efficiency. Treatment can be only symptomatic but everything that builds up the general condition is a help, sustaining the heart, possibly also whipping up the neutrophil leukocytes. He remarks that it is odd that the diseases with pronounced neutrophil leukocytosis, pneumonia, diphtheria, tonsillitis and erysipelas, do not immunize against future attacks, but instances are known of complete recovery from leukemia after intercurrent erysipelas. Glaser has reported a case of severe dropsy with subacute nephritis in a boy of 12 who was permanently cured after an attack of erysipelas.—*The Journal of the Am. Med. Asso.*

Tuberculosis in Children.

R. M. Smith, in Boston Medical Journal, emphasizes the distinction between tuberculosis infection and tuberculous disease. Tuberculous infection occurs in many instances without symptoms sufficient to attract any attention and then goes on unrecognized. It may give no signs on physical examination, but usually thoracic and abdominal gland tuberculosis is made evident by the local signs of enlarged glands. There may be chronic enlargement of the bronchial or mesenteric glands from infection with some other organism than the tubercle bacillus. It is necessary to have a positive von Pirquet reaction to make the diagnosis of tuberculosis. The von Piquet reaction may be taken as a safe index to tuberculous infection. The instances in which a negative reaction

occurs in the presence of a tuberculous infection are usually instances which can be explained according to well-known facts. Unless the tuberculous infection is active, it is not a source of immediate danger, either to the individual or to the community. A child with such an infection should be treated, not as a patient with active tuberculosis, but as an individual to be watched carefully, fed properly and put under good hygenic surroundings in order that the disease may not become active. Tuberculous disease means an active tuberculosis. This condition in children starts as a glandular disease, but has a great tendency to extend beyond the confines of its original seat within the gland, and when such an extension occurs there is apparently little further tendency to localization. It becomes at once a generalized process, leading often to rapid death. After the age of ten years, tuberculosis assumes the characteristic of adult tuberculosis, but before that age, the diagnosis must be made on different evidence. The symptoms are usually very indefinite. There is little or no cough and almost never any sputum. The temperature is frequently not greatly elevated, and not more elevated than occurs in infants and young children from a variety of causes. Physical examination in the early stage of the disease reveals nothing other than a child in poor condition with enlarged glands. When the disease extends beyond the glands into other parts of the body the physical signs become more definite. In the lungs they may be those of bronchopneumonia and frequently this diagnosis is made when there is no suspicion of tuberculosis.—*Pediatrics.*

Pellagra Treated with Picric Acid.

In thirty-five cases the eruption was treated by W. T. Wilson (Bulletin Harris County Medical Society, July, 1914) with picric acid gauze official, or gauze soaked in a saturated solution of picric acid. For mucous membranes a 0.5 per cent solution was used as a gargle. Internally most patients were given 25 drops of a 1 per cent solution three times a day; some ¼ to ½ grain every three hours. Only three patients were put on a diet. All

three were insane and were placed on milk and egg for from seven to ten days and regular diet after that.

Improvement is first noted in the mucous membrane of the mouth, tongue and throat about the fourth day; in about five days intestinal symptoms improve, and in about seven days the skin begins to desquamate and assume a natural appearance. A majority of these cases had the dry form, but four or five were of the moist form of erythema. The two types were amenable to treatment. There were no toxic effects from the drug in evidence in any case.—*The Journal of the Am. Med. Asso.*

The Outlook in Epilepsy.

W. A. Turner states that when a case of epilepsy first comes under observation certain features are present by which the outlook may be surmised. As features of a favorable character may be mentioned the commencement of the disease between the age of 16 and 20, especially if a hereditary history is obtained, and some obvious exciting cause for the disease is present; the commencement of the disease after 40 or 45 years of age, provided organic disease of the brain can be eliminated; the infrequent occurrence of the seizures, and the absence of any obvious mental impairment or well marked stigmata of degeneration. In contradistinction to the above mentioned types of epilepsy, there is the incurable, chronic, or confirmed type, which finds its way eventually into institutions for epileptics. Epileptic dementia is revealed by all grades of mental deficiency, from a mere defect of memory, especially for recent events, up to pronounced dementia. Although an integral part of the disease it may be modified to some extent by the duration, the frequency, and the character of the seizures. Once the mental condition has become materially affected in the direction of dementia, the outlook as regards any real amelioration is unfavorable, although the fits may be kept in abeyance over long periods by sedative remedies.—*Med. Record.*

Treatment of Ringworm of the Scalp.

P. E. Bechet states that the most valuable local remedies in this condition are iodine (with genuine goose grease as a base it is very efficient particularly in the early cases), and mercury in the form of ammoniated mercury up to 10 per cent strength, or oleate of mercury in 10 to 25 per cent ointment. Chrysarobin, in saturated solution in chloroform, painted on, and after evaporation of the chloroform, covered with several layers of collodion, is particularly useful in the chronic cases. Sulphur in 20 per cent ointment with 10 per cent naphthol, is very useful. An ointment which is frequently used at the New York Skin and Cancer Hospital with good results when the parents are sufficiently impressed with the necessity of vigorous application, consists of red oxide of mercury ointment, a dram and a half; sulphur ointment, three drams; cold cream, one ounce. Needling as recommended by Aldersmith should be reserved for the more stubborn cases, as it is rather a severe measure depending on an inflammatory reaction and the formation of a kerion for its success. In the absence of inflammation one can not be too vigorous in the application of any of the parasiticide ointments. This really constitutes the key to a successful result, a fact easily understood when one considers the location of the fungus.—*Medical Record.*

A Typhoid Carrier at a Public Dinner.

W. A. Sawyer has traced the source of infection in ninety-three cases of typhoid fever in an epidemic at Hanford, Cal., to a typhoid carrier who prepared food served at a public dinner The vehicle of infection was a large pan of Spanish spaghetti prepared by the carrier. This dish was baked after it had been infected, but this baking was shown by laboratory experiments to have incubated the bacteria instead of sterilizing the food. Certain customary methods of cooking are thus shown to be inadequate as a protection against infection. The incubation period in the majority of the cases in this epidemic of typhoid fever

proved to be shorter than the time usually regarded as the minimum. The first case developed three days after infection. More cases showed their first definite symptoms six days after the infected food was eaten than on any other one day. The ways in which a carrier may transmit infection are so varied and so numerous that attempts at the control of mere channels of infection will not offer sufficient protection. Those who were suspicious of the raw salad at the dinner in Hanford and ate the freshly baked spaghetti turned from a safe dish to one which was heavily infected. The best protection against carriers will come through thorough investigation of the source of infection in every case of typhoid fever. When carriers are discovered they can be advised and controlled. The writer warns us that until we have a sufficiently large number of properly trained epidemiologists on a full-time basis among State and local health officials the danger from carriers will not be noticeably diminished, and the individual will find in antityphoid vaccination his best protection against infection from carriers.—*Medical Record.*

A Suggestion Concerning Congestion in Rheumatism.

I desire briefly to call attention to a little procedure commonly used by surgeons with benefit in treating infections and which may be useful in the treatment of acute articular rheumatism. I refer to passive congestion produced by constriction of an extremity or otherwise. Acute articular rheumatism is a systemic infection with particular affinity for joint structures, and this procedure, which aids Nature by flooding the involved portion with Nature's own anti-bodies, is sound in principle. Venous congestion does more than this, however, when salicylates are being administered. The ingested salicylates exist in the alkaline blood and tissues only as salicylates, and these have no germicidal action. However, in the presence of greatly increased carbon dioxid tension, some salicylate is converted into salicylic acid, and this is a powerful germicide. It is supposed that in the congestion of an inflamed joint this conversion takes place. Thus if the

salicylates do have any direct effect on the organisms causing the disease, that effect is increased by retarding the venous circulation of a part involved.—*The Journal of the American Medical Association.*

OBSTETRICAL

Fibroid Tumor in Pregnant Uterus.

When about two months pregnant Reid's patient while helping to put down a carpet felt a sudden pain to the right of the pelvis; it was not very severe, but she had to rest awhile. Next day she still had pains, but she was able to take an active part in a whist drive and dance. The following day the pains were worse, and she sent for her physician. The pains increased in severity in spite of rest and palliative treatment; vomiting and inability to sleep added to her distress and her condition was fast becoming somewhat alarming.

On opening the peritoneal cavity 4 to 5 ounces of dark venous blood gushed out, and there were extensive but recent adhesions of parietal peritoneum, omentum and small gut around the tumor. On separating these Reid found a soft fibroid tumor about the size of a fetal head at full term, partially extruded from the uterine wall to the right of the fundus. The rent in the uterus was fully five inches long, the edges of the tear were ragged, and there was slight venous bleeding. The fibroid had burst through its capsule, and at least half of it lay external to the uterine wall. The body of the uterus was enlarged and suggested a pregnancy of two or three months' duration. The tumor was easily shelled out, and the bleeding stopped by deep chromic gut sutures inserted to close the rent in the uterus. The abdomen was closed without drainage. On examination after removal the fibroid gave the appearance of being in an early stage of red degeneration. The pain entirely ceased after the operation, and the patient made an excellent and rapid recovery.—*Journ. of the Am. Med. Asso.*

Dystocia Due to Enlargement of the Fetal Bladder.

Bohi describes a case in which the fetal bladder contained three liters of fluid and constituted an absolute interference with labor. The diagnosis was not made at the time but after puncture of the cystic mass, delivery was accomplished without difficulty. A very careful autopsy was made which is presented in its entirety. The bladder was found to consist of three portions of which the center had undergone a marked hypertrophy and hyperplasia of its muscular walls. The bladder was intimately connected with the musculature of the abdominal wall and by its size displaced the various abdominal and pelvic organs. The urethra was completely absent and this resulted in the extreme distention observed.—*The Post-Graduate.*

Ectopic Gestation.

Dr. C. D. Palmer reports a case of ectopic gestation, which seems unusual, because of having occurred twice in the same individual. About ten days ago, I was called during the night to the bedside of a patient whom I had frequently attended. I found her pale, pulse almost imperceptible, and breathing but slightly. She had the appearance of a person suffering from a serious hemorrhage. After some inquiry, I determined that this was a case of ectopic gestation. She was removed to Christ's Hospital, and the ectopic sac extirpated.

It so happened that about ten years since, I was called to her in consultation by a German physician, who was attending this same woman. Her condition at that time was much worse than I found a few days ago; she was paler, absolutely pulseless at wrist and over carotid artery at temple. After taking the history, we decided that it was an ectopic gestation; had her hurriedly taken to the Bethesda Hospital, in an ambulance, where I opened the abdomen, finding on the left side of uterus a mass having the appearance of a ruptured ectopic gestation sac, at the third month. This I removed, flushing the abdominal cavity with hot salt water.

After the operation was completed, we placed her in a dorsal position with the lower part of her body much elevated. We gave her a little nourishment, both by rectum and by mouth. After some forty-eight hours had passed, her pulse could be slightly detected, she began to rally, the pulse and respiration became stronger, she gradually improved day by day, until at the end of some four weeks, she was able to go about her home the same as usual.

The unusual feature of this case is that in my recent call to the bedside of this woman, I found the same condition, except that the symptoms were not nearly so pronounced. I sent for my son, Dr. Dudley Palmer, and we operated, removing the mass this time from the right side. The woman is progressing nicely and promises to make a good recovery.—*The Lancet-Clinic.*

The Influence of Douches on the Bacterial Content of the Vagina in Pregnancy.

The author presents the results of an extended series of observations made at the end of pregnancy in which the effect of douching was controlled by careful bacteriological examinations. A total of forty-four cases was studied and solutions of oxycyanide, bichloride of mercury, lysoform and potassium permanganate were found to diminish only temporarily the number of colonies and this was likewise observed after the application of tampons saturated with solutions of iodine and alcohol. The results were very unsatisfactory with the use of distilled water as well as of boracid acid and aluminum acetate as well as the dry treatment with powder. It would appear, therefore, that these douches are entirely unnecessary in the presence of normal vaginal secretions. In the presence of bacteriological conditions, however, the quantity of infections material is undoubtedly diminished and further experiments with the use of lactic acid douches are still in progress and those are apparently of considerable value.—*Post--Graduate.*

Pituitrin in Labor.

Writing to the *British Medical Journal* of May 2, 1914, Hughes states that the interesting account in the issue of the *British Medical Journal* of April 25, 1914, by Dr. P. A. Hendley, of his use of pituitrin, needs both qualifying and supplementing. The statements that follow are based on a personal use of this agent in close upon 50 cases of normal labor during the past 18 months. Without doubt, pituitrin is a most valuable help to both patient and doctor in such cases. Labor is considerably shortened, the use of forceps is usually obviated, chloroform can be given without failure of uterine contractions, and stillbirths need not be anticipated. In his cases only one stillbirth has occured. In this case (a primpara) the child lived up to the time the head was born; the placenta was large and thickly studded with yellow nodules. The father was under treatment for syphilis. Hughes could attribute the death to some cause connected with syphilis, not to pituitrin. In the majority of cases the children have behaved quite normally on delivery, but in some cases he has observed a curious rigidity of muscles, including those of respiration, which passed off quickly and without struggle.

Dr. Hughes states that Dr. Hendley entirely omits to mention the state of the cervix after delivery in his cases, and his practice of giving a considerable dose of pituitrin (0.75 to cc.) while the os is small is not justified in the present state of our knowledge. Thus, a multipara with her sixth child had uterine inertia. Owing to the entire absence of expulsive effort for some hours, the head, though normally presenting, had retreated to a little below the pelvic brim. The cervix was intact and patulous, and believing that two or three forcible pains might finish the first stage, Hughes gave her 1 cc. of pituitrin. Labor was completed within one minute and a half. His pleasure at this astonishingly quick result was decidedly dampened on finding a pretty extensive laceration of the cervix on one side.

The effect, indeed, of pituitrin on the duration of a normal labor can only be guessed, not accurately calculated. His prac-

tice is now in primipara to wait till the end or very nearly the end of the first stage, and with a multipara to test the cervix during a pain to make sure it is not rigid but yielding easily, before giving pituitrin. If these precautions are not observed there is an obvious risk of leaving the woman with a lacerated cervix. Again, in obstructed labor—for example, in moderately contracted pelvis—the principle of forcing the head onward by any such means is radically unsound. This is amply proved by recent statistics of the Rotunda Hospital, Dublin, concerning the effect of the use and non-use of forceps in contracted pelvis.

In less than one minute after a full dose of pituitrin the uterus goes into continuous contraction. After about ten minutes remissions between the contractions become increasingly evident, and in from thirty-five to forty-five minutes the effect of the first dose has passed off. Now if delivery occurs just after the effect of a dose has passed off there is a risk of postpartum hemorrhage. The uterine muscle is temporarily exhausted, and the organ gets "lost" under the hand with unpleasant frequency. For the same reason it may be troublesome to deliver the placenta. This particular contingency should therefore be avoided by giving a second dose in time, and not less than 0.5 cc.

In conclusion, Hughes agrees that pituitrin infundibulum has a great future before it in obstetrics, and especially in uterine inertia.—*The Therapeutic Gazette.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at $1.00 a year, to be always paid in advance.

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All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

ASEPSIS.

To write of asepsis in the year 1914 except in a textbook seems strangely out of place, and yet one only has to attend either public or private clinics to find out that asepsis, real asepsis, is more talked about than practised. An observing visitor to clinics will be struck by the mighty array of caps, gowns, rubber gloves and face masks and at the same time wonder at the numerous slips in an aseptic technic. Many physicians, even in this day and time, think a momentary dip in a solution of bichloride will destroy all pathogenic germs when, as a matter of fact, the hands should be held in such solution for a long time, and even then can not be considered clean without a previous thorough scrubbing, and soaking in alcohol.

Again, we find surgeons who only make the veriest pretense of cleaning up when pus is already present. Of course they have not kept abreast of the times and the teachings of bacteriology which show conclusively that mixed infections are often much more severe than a pure strain infection. That rubber gloves are not an essential to success in surgery we all know, for some of our greatest surgeons seldom use them. That they are useful, indeed indispensable, for those handling pus and clean cases on the same day can not be gainsaid. As for the use of mouth pieces, face masks, etc., we must say that in our opinion a clean shaven,

clean face, is better than any mask yet devised, and we say this, knowing full well that most of our greatest surgeons use them as a matter of routine. With a cover over his mouth a man can not speak without causing friction between the skin and the mask, which necessarily loosens epithelium and germs, while the force of gravity hurries both into the open wounds below. Should the mask cover all except the eyes, then every wink and blink loosens germs and dirty epithelium. If masks are going to be used, then the face should be greased with some mild antiseptic ointment. Finally, we all realize that our most perfect asepsis is really imperfect, we can but do our best and trust Nature for the rest, and she will do her part—the largest part—provided we get the patient in a good condition before any surgical work is undertaken. Therefore, if you want good results in your surgical work do not rush the patient from the train to the operating room except in the most urgent cases and do not scrub your hands for ten minutes and then adjust your glasses.—W. T. B.

No Need to Fear Meat.

No Cattle with Foot-and-Mouth Disease Being Slaughtered in Federally Inspected Establishments. Thorough Cooking will Render Uninspected Meat from Local Slaughter Houses Thoroughly Safe.

Washington, D. C.——. According to the specialists of the Department of Agriculture people even in states quarantined for the foot-and-mouth disease need have no fear of eating meat, provided they cook it thoroughly. The foot-and-mouth disease is not easily communicated to human beings through food, although milk from a diseased cow might transmit the disease to a human being. In the case of milk, however, pasteurization will render it entirely safe. Human beings who do get the disease commonly get it from direct contact with a sick animal. It is wisest, therefore, for people to keep away from all animals hav-

ing the disease, unless they are properly provided with rubber gloves, coats and boots, and these are thoroughly disinfected after each visit to the animals.

In the case of meat, as in the case of milk, it must be remembered that all herds which actually show the disease are quarantined, and neither milk not meat from the sick animals can be sold. Sixty per cent of the meat used in this country is produced in the nearly 900 federally inspected slaughtering and packing establishments located in 240 cities. In these establishments no animal is slaughtered until it has passed an ante-mortem inspection and also a most rigid post-mortem inspection by a veterinarian at time of slaughter. After slaughter its meat can not leave the establishment until it has been carefully examined and stamped "U. S. Inspected and Passed." In all these establishments no animal showing any symptoms whatever of foot-and-mouth disease is allowed to go to slaughter, and no meat which, on post-mortem inspection, shows any. suspicious symptoms of this complaint, can be shipped out of the establishment. All meat suspected of coming from an animal suffering with this complaint is sent, under government seal, to the tanks to be rendered into fertilizer. The Federal inspection stamp on meat, therefore, means that it is entirely safe.

The Federal Government, however, has no jurisdiction over local slaughter houses which do not ship meat outside of the State in which it is slaughtered. If, however, meat from such animal did escape from one of these local slaughter houses, which are purely under State or municipal control, all danger of its communicating the disease to human being would be removed when it is thoroughly cooked and sterilized. Those who are located near an infected region and wish to be absolutely certain of the safety of their meat should cook it thoroughly.

The disease, when contracted by adults, is not at all a serious illness. It commonly takes the form of slight fever, sores in the mouth and a slight eruption on the fingers. In the case of small or sickly children, it may take a more serious form, especially if complicated by other illnesses.

United States Chamber of Commerce to Study Food and Drugs Question.

The Chamber of Commerce of the United States of America, a body composed of representatives from about 600 local boards of trade, chambers of commerce, and trade associations, widely distributed throughout the United States, has taken up the study of the subject of uniform food and drug regulation. For this purpose a special committee was appointed in July, and its first meeting was held at the headquarters of the Chamber in Washington, October 8. The committee is composed of Willougby M. McCormack, of Baltimore, A. J. Porter, of Niagara Falls, John A. Green, of Cleveland, B. L. Murray, of New York and Theodore F. Whitmarsh, of New York. Mr. McCormack, the Chairman, is a member of the Board of Directors of the Chamber of Commerce of the United States and the head of the firm of McCormack & Co., manufacturers of extracts and drugs and importers of spices and teas; Mr. Porter is President of the Shredded Wheat Co.; Mr. Green is Secretary of the National Association of Retail Grocers; Mr. Murray is chemist to Merck & Co., and Mr. Whitmarsh is Vice President of Francics H. Leggitt & Co.

The first meeting of the committee was devoted to organization and the preparation of a program for the committee's future work. The following resolution was adopted:

Resolved, That the Chairman be, and he hereby is, authorized and empowered to appoint two sub-committees to consider, respectively, the problems relating more particularly to food control and to drug control, and to report their findings to the general committee.

As a result of the above resolution, Mr. McCormick appointed Mr. Murray as Chairman of the sub-committee on drug control and Mr. Porter as Chairman of the cub-committee on food control.

The following resolution commending the efforts of the Department of Agriculture tending towards coöperation and uniformity was also adopted:

Resolved, That this committee hereby earnestly and heartily endorses the establishment of the bureau in the United States Department of Agriculture, particularly concerned with Federal and State coöperation in the enforcement of the Food and Drug Control Laws, thereby promoting an equal and uniform enforcement of such laws, believing that this work is distinctly in the public interest.

The position taken by the committee on the meaning of uniformity is interesting and will repay close examination. Its views are not confined to a limited horizon, but are intended to grasp the broader and wider fields. Its efforts will be confined to no organization or class of people. It hopes to cover in its endeavors the position of the wholesaler, the retailer, the consumer, the manufacturer, the official, and all others concerned in the production, handling and consumption of food and drugs. But only the broad, general questions of national character will be considered. After a lengthy discussion the committee at its meeting, by unanimous vote of all present, adopted the following regarding uniformity:

> Uniformity, as the committee would define it, involves the highest degree of efficiency in food and drug control which it is possible to have prevail universally and equally in every part of the nation. The Federal, State and Municipal laws and their regulations would, if perfect uniformity were attainable, reach the level of full and complete efficiency—and thereby afford equal protection and a uniform standard of living for all the people. Uniformity accomplished, places merit and the general public interest over local political or geographical divisions. This committee will, therefore, direct its efforts and consideration toward the accomplishment of uniformity. The committee can not but feel impressed with the magnitude, the importance, and the seriousness of its work. It can not but feel the need for the closest study of the subject. And again, the committee can not but feel the necessity for the fullest and most cordial coöperation between itself and the officials and all others

concerned. The committee will, of necessity, act deliberately and slowly, making certain of each step, considering only the important problems of national character.

Vermont's Poison Lesson.

Fourteen Deaths Were Caused by Wood Alcohol—Secretary of the Committee for Prevention of Blindness Points Out the Danger in the Improper Labeling of Poisonous Spirits.

The recent tragedy in Vermont, in which fourteen persons were killed and a number of others blinded by drinking whiskey adulterated with wood alcohol, brings forcibly to mind the fact that legal provisions throughout the country are inadequate to prevent wood alcohol poisoning. The Vermont incident is an example of what happens every little while in other states.

A very recent instance is that of a number of Armenian rug weavers in New York City who were poisoned by drinking anisette consisting largely of wood alcohol. Three of the men died, and two were blinded. As the groceryman who sold the anisette and the man who manufactured it have no property, it is not possible to secure damages for those who were blinded, nor for the widows of the men who died. These cases may be prosecuted by the District Attorney and small fines imposed, the payment of which would simply enrich the State, but in all probability have little or no effect upon the problem as a whole.

The difficulty goes further back than even the small manufacturer, that is, to the producers of wood alcohol who rectify this poison so highly that it can not be distinguished from grain alcohol, known to the trade as Cologne spirits. This rectified wood alcohol, possessing all of its original poisonous qualities and closely resembling grain alcohol, is put on the market under various misleading names, among them being Colonial spirits. As

Cologne spirits and Colonial spirits look, smell, and taste alike, we can not wonder that the poisonous alcohol is sometimes used instead of the non-poisonous spirit.

VERMONT DRUGGIST MISLEAD, HE SAYS.

The Vermont druggist claims that he ordered, and thought he was using, Cologne spirits, but that he was actually sold the poisonous Colonial spirits.

During the last session of the New York State Legislature, the Committee for the Prevention of Blindness, endeavored to have passed a law designed to prevent wood alcohol poisoning. At the public hearing on this bill, the danger of confusing Cologne and Colonial spirits was emphasized by the President of the State Pharmaceutical Association. He described a case in which a druggist ordered Cologne spirits, or grain alcohol, to use in preparing his tinctures, extracts, etc. In response to his order he received a five-gallon can labelled "Col. spirits." For some reason this druggist analyzed the contents of the can, and found it to be wood alcohol, the "Col. spirits" evidently being used as an abbreviation for both Colonial and Cologne spirits. Since as little as a teaspoonful of wood alcohol has caused blindness, this man's precaution evidently averted just such a tragedy as has occurred in Vermont.

In spite of the abundance of such evidence as this concerning the dangers of allowing wood alcohol to be sold under present conditions, those interested in the manufacture of this product were successful in their efforts to have the committee's bill defeated.

The New York City Department of Health has recently amended its sanitary code to require all forms of wood alcohol to be labelled "wood naphtha" and to bear a poison label, together with the skull and crossbones. This is the most definite step that has thus far been taken in this country toward preventing wood alcohol poisoning from imbibition. This requirement, however, will be effective only in New York City, and will have no bearing upon poisoning following the inhalation of wood alcohol fumes in the industries.

Throughout the State of New York the combined provisions of the State Liquor, Pharmacy, and Agricultural Laws are at present inadequate to prevent death and blindness from swallowing and inhaling wood alcohol.

When by State law or through rulings made by the State departments, all forms of wood alcohol are labelled poison, as is required by the New York City Department of Health, and wood alcohol in the industries is replaced by industrial (denatured) alcohol, we shall cease to hear of these pathetic and wholesale disasters.

CAROLYN C. VAN BLARCOM,
Executive Secretary.

Reviews and Book Notices

"The Formulary for the Treatment of Disease in Children"—By Ludwig Freyberger, Jr., M.D., Vienna, M. R. C. P., Lond.; M. R. C. S., Eng. Barrister at Law, Lexicologist and Pathologist, Etc. Fourth, Revised and Enlarged Edition. Adapted to the British Pharmacopoeia, with an Appendix on Poisons, their Symptoms and Treatment. New York. Rebman Co., Herald Square Bldg., 141-145, W. 36th St.

This is a most useful handbook for the busy practitioner as an aid to practice, for it enables him at a glance to select a suitable formula for the treatment of any disease to which children are liable. The book is of pocket size and so arranged that reference can be quickly made and the text is printed in such a form that a glance is all that is necessary to interpret the origin and character of the formula. The drugs are arranged in alphabetical order. There is given in the text a brief account of the properties of the drugs, use, therapeutics, incompatibles, correction of taste, examples of formulæ, their antagonists and incompatibles. A special feature is the care devoted to means of rendering the tastes of unpleasant drugs more palatable. It is an ideal pocket formulary that will prove of the greatest help to every practitioner.

"The Clinics of John B. Murphy, M.D.", at Mercy Hospital, Chicago. Vol. III, No. 3. Octavo of 215 pages, 54 illustrations. Philadelphia and London. W. B. Saunders Co., 1914. Published Bi-Monthly. Price per year: paper, $8; cloth, $12. W. S. Saunders Co., Philadelphia, London.

This number of the Clinics, like most of its predecessors, contains many very interesting and instructive chapters. Especially interesting to us were the articles on Ileus, Arthroplasty, Colles Fracture and Paget's Cancer. While each new number reiterates in some chapters, matters brought out in previous numbers, we do not find this a great drawback, nor do we think the profession as a whole finds it so, because it is in that way alone that these clinical lectures are going to do the most good. We take pleasure in commending this number of the clinics, and advise our subscribers to subscribe to this work.

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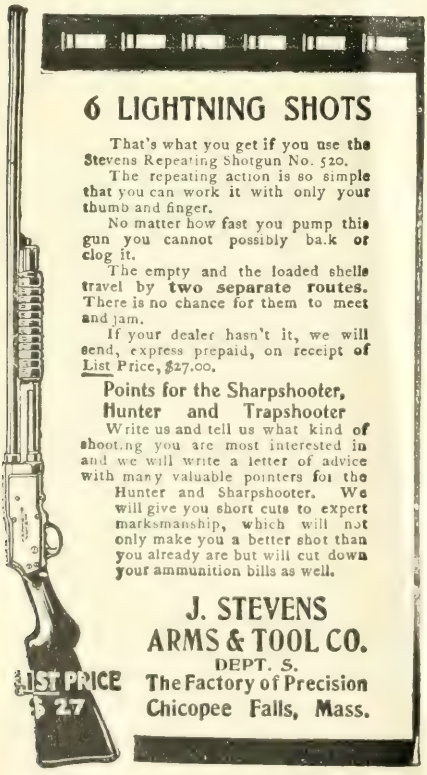

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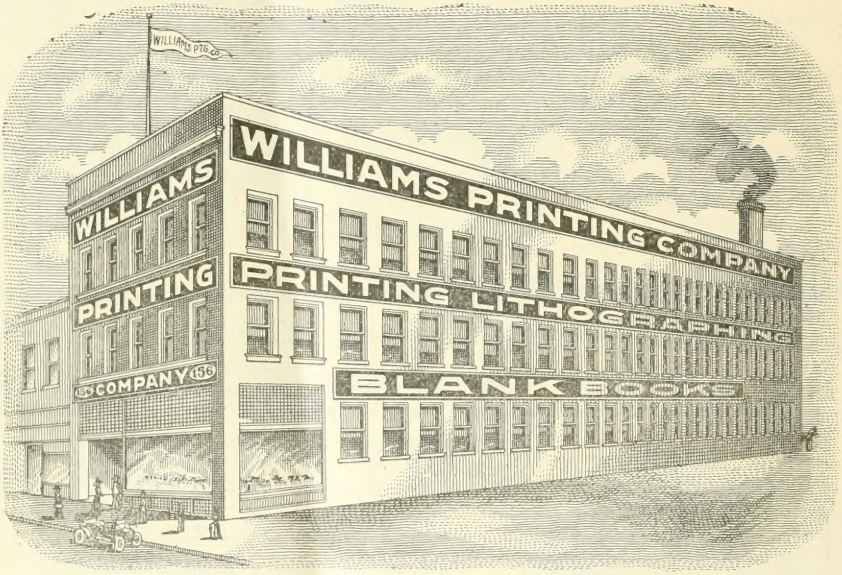

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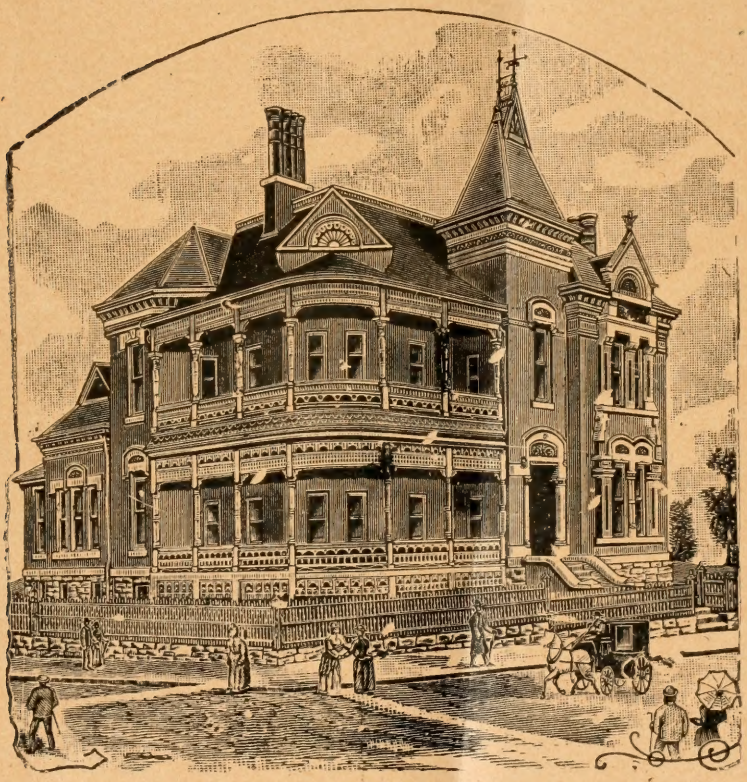

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